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Under the URA	ANSWITTALADE	MARKO			3 Boggs
	all correspondence after initial fi		Attorney Docket Number	111079-13	
Total Number of	Pages in This Submission				
Amendme  Al  Al  Extension  Express A  Information  Certified C  Documen  Reply to I  Incomplet	fter Final  ffidavits/declaration(s)  n of Time Request  Abandonment Request  on Disclosure Statement  Copy of Priority		Drawing(s)  Licensing-related Papers  Petition  Petition to Convert to a  Provisional Application  Power of Attorney, Revocation  Change of Correspondence o	Address	After Allowance Communication to TC  Appeal Communication to Board of Appeals and Interferences  Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  Proprietary Information  Status Letter  Other Enclosure(s) (please Identify below):  Return Receipt Postcard
Firm Name	SIGNAT	URE C	OF APPLICANT, ATTO	RNEY, C	OR AGENT
Firm Name	Schwabe, Williamson & W	yatt, P.C.			
Signature	Num				
Printed name	Robert Watt		-		
Date	11/11/2004			Reg. No.	45890
	at this correspondence is be	eing facsir		TO or depos	ILING sited with the United States Postal Service with P.O. Box 1450, Alexandria, VA 22313-1450 on
the date shown be	elow:		+	————	O. BOX 1430, Alexandra, VA 22313-1430 011
Signature Albthu adamson					

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Heather L. Adamson

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Date

11/11/2004

PTO/SB/17 (10-04v2)

Approved for use through 07/31/2006. OMB 0651-0032
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	for	FY	200	5	

Effective 10/01/2004. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

(A)	0.00	
<b>(D)</b>	0.00	

Complete if Known				
Application Number	10/750,560			
Filing Date	12/31/2003			
First Named Inventor	David W. Boggs			
Examiner Name	Not Yet Assigned			
Art Unit	1772			
Attorney Docket No.	111079-135918			

METHOD OF PAYMENT (check all that apply)	FEE CALCULATION (continued)					
Check Credit card Money Other None	3. ADDITIONAL FEES			·		
Deposit Account:	Large Enti					
Deposit Account 500393	Fee Fe Code (\$)		ee ode	Fee (\$)	Fee Description	Fee Paid
Account Number 500393	1051 13	30 2	2051	65	Surcharge - late filing fee or oath	
Deposit Account Schwabe Williamson et al.	1052 5	50 2	2052	25	Surcharge - late provisional filing fee or cover sheet	
Name The Director is authorized to: (check all that apply)	1053 13	30 1	1053		Non-English specification	
Charge fee(s) indicated below Credit any overpayments	1812 2,5	20 1	1812 2	2,520	For filing a request for ex parte reexamination	
Charge any additional fee(s) or any underpayment of fee(s)	1804 92	20*	1804	920 <b>*</b>	Requesting publication of SIR prior to Examiner action	
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.	1805 1,84	40* 1	1805	1,840*	Requesting publication of SIR after Examiner action	
FEE CALCULATION	1251 1°	10	2251	55	Extension for reply within first month	
1. BASIC FILING FEE	1252 4	30	2252	215	Extension for reply within second month	
Large Entity Small Entity	1253 9	80	2253	490	Extension for reply within third month	
Fee Fee Fee Fee Pee Paid Code (\$) Code (\$)	1254 1,5	30	2254	765	Extension for reply within fourth month	
1001 790 2001 395 Utility filing fee	1255 2,0	80	2255	1,040	Extension for reply within fifth month	
1002 350 2002 175 Design filing fee	1401 34	40	2401	170	Notice of Appeal	
1003 550 2003 275 Plant filing fee	1402 34	40	2402	170	Filing a brief in support of an appeal	
1004 790 2004 395 Reissue filing fee	1403 30	00	2403	150	Request for oral hearing	
1005 160 2005 80 Provisional filing fee	1451 1,5°	10	1451	1,510	Petition to institute a public use proceeding	
SUBTOTAL (1) (\$) 0.00	1452 1°	10	2452	55	Petition to revive - unavoidable	
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE	1453 1,3	70	2453	685	Petition to revive - unintentional	
Fee from	1501 1,3	70	2501	685	Utility issue fee (or reissue)	
Extra Claims below Fee Paid  Total Claims 20** = X	1502 49		2502		Design issue fee	
Independent 3** - V			2503		Plant issue fee	
Claims -3 - A - A - A - A - A - A - A - A - A		30	1460		Petitions to the Commissioner	
Large Entity   Small Entity	1807	50	1807	-	Processing fee under 37 CFR 1.17(q)	
Large Entity   Small Entity	1806 18	80	1806		Submission of Information Disclosure Stmt	
Code (\$) Code (\$)	8021	40	8021	l 40	Recording each patent assignment per property (times number of properties)	
1202 18 2202 9 Claims in excess of 20 1201 88 2201 44 Independent claims in excess of 3	1809 79	90	2809	395	Filing a submission after final rejection (37 CFR 1.129(a))	
1203 300 2203 150 Multiple dependent claim, if not paid	1810 79	90	2810	395	For each additional invention to be	
1204 88 2204 44 ** Reissue independent claims	1004 7		2004	30.	examined (37 CFR 1.129(b))	
over original patent			2801 1802	900	Request for Continued Examination (RCE)  Request for expedited examination	
1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent	1002 9	,,,,,	1002	300	of a design application	
SUBTOTAL (2) (\$) 0.00	Other fee	(spec	cify) _			
**or number previously paid, if greater; For Reissues, see above	*Reduced	by B	Basic F	Filing F	ee Paid <b>SUBTOTAL (3)</b> (\$) 0.00	

SUBMITTED BY			(Complete (	(if applicable))
Name (Print/Type)	Robert Watt	Registration No. (Attorney/Agent) 45890	Telephone	503-222-9981
Signature	prun		Date	11/11/2004

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IN THE UNITED STATES RATENT AND TRADEMARK OFFICE

In re Application for:

David W. Boggs et al. 🖔

Application No.: 10/750,560

Filed: 12/31/2003

For: ELECTRONIC SUBSTRATE WITH

DIRECT INNER LAYER

COMPONENT

INTERCONNECTION

Examiner: Not Yet Assigned

Art Group: 1772

Confirmation No. 5692

CERTIFICATE OF TRANSMISSION/MAILING

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Typed or Printed: Heather L. Adamson

anature (1) (1/1/2004) Hate: 11/11/2004

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## **INFORMATION DISCLOSURE STATEMENT**

Sir:

Pursuant to 37 C.F.R. § 1.97(g), the submission of this Information Disclosure Statement (IDS) is not to be construed as a representation that a search has been made, and, pursuant to 37 C.F.R. § 1.97(h), the submission of this IDS is not to be construed as an admission that the information cited in this IDS is material to patentability.

This IDS is being submitted under one or more of the following sections of 37 C.F.R. § 1.97 (as indicated by an "X" to the left of the appropriate paragraph(s)): X 37 C.F.R. § 1.97(b). Filed: (1) Within three months of a National Application other than a CPA; (2) Within three months of entry into National Stage: (3) Before mailing of a first Office Action on the merits; or (4) Before mailing of a first Office Action after filing an RCE. 37 C.F.R. § 1.97(c). Filed before the mailing of a Final Office Action. Notice of Allowance, or an action that otherwise closes prosecution. And, ONE of the following: (1) One statement from 37 C.F.R. § 1.97(e); (e)(1) The person signing below certifies that each item of information contained in this IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or (e)(2) The person signing below certifies that no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing below after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 1.56(c) more than three months prior to filing this IDS. (2) The fee set forth in 37 C.F.R. § 1.17(p). A check in the amount of \$180.00 is enclosed. 37 C.F.R. § 1.97(d). Filed on or before payment of the issue fee. And, BOTH of the following: (1) one statement from 37 C.F.R. § 1.97(e); (e)(1) The person signing below certifies that each item of information contained in this IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or (e)(2) The person signing below certifies that no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing below after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 1.56(c) more than three months prior to filing this IDS. (2) The fee set forth in 37 C.F.R. § 1.17(p). A check in the amount of \$180.00 is enclosed.

Accompanying this IDS is a list of references and a copy of each reference listed therein, EXCEPT copies of references waived under:

(A) one or more of the following sections of 37 C.F.R. § 1.98 (as indicated by an "X"
to the left of the appropriate paragraph(s)):
37 C.F.R. § 1.98(c) as being cumulative (marked with an "*" on the Form PTO-1449).
37 C.F.R. § 1.98(d) as being previously submitted in parent application/,, to which the present application claims priority under 35 U.S.C. § 120.
(D) 4070 OF O = D-t Office FF as below substituted. The constant

(B) 1273 Off. Gaz. Pat. Office 55 as being submitted with respect to an application filed after June 30, 2003.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393. A Fee Transmittal is enclosed in duplicate for fee processing purposes.

> Respectfully submitted, Schwabe, Williamson & Wyatt, P.C.

11/11/04 Dated:

Registration No. 45,890

Pacwest Center, Suites 1600-1900 1211 SW Fifth Avenue Portland, Oregon 97204

Telephone: 503-222-9981

Application No.: 10/750,560

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Sheet 1

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known				
Application Number	10/750,560			
Filing Date	12/31/2003			
First Named Inventor	David W. Boggs			
Art Unit	1772			
Examiner Name	Not Yet Assigned			
Attorney Docket Number	111079-135918			

			U. S. PATENT	DOCUMENTS	
Examiner Initials* Cite No.1 Document Number Number-Kind Code <sup>2 (# known)</sup>		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	1	<sup>US-</sup> 5,527,740	06/18/1996	Golwalkar et al	
	2	<sup>US-</sup> 5,545,922	08/13/1996	Golwalkar et al.	
	3	<sup>US-</sup> 6,580,174 B2	06/17/2003	McCormick et al.	
	4	<sup>US-</sup> 6,642,158 B1	11/04/2003	Brist et al.	
	5	<sup>US-</sup> 6,667,090 B2	12/23/2003	Boggs et al.	
	6	<sup>US-</sup> 6,747,216 B2	06/08/2004	Brist et al.	
	7	<sup>US-</sup> 6,787,443 B1	09/07/2004	Boggs et al.	
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	FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages				
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T <sup>6</sup>			

Examiner	Date	
Signature	Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

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